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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/936,756	09/17/2001	Ulrich Stieler	02365	8945
987	7590	01/02/2004	EXAMINER	
SALTER & MICHAELSON THE HERITAGE BUILDING 321 SOUTH MAIN STREET PROVIDENCE, RI 029037128			KUHN, ALLAN R	
			ART UNIT	PAPER NUMBER
			1732	

DATE MAILED: 01/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/936,756

Applicant(s)

STIELER, ULRICH

Examiner

Allan Kuhns

Art Unit

1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2003 and 24 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-16 and 19-24 is/are rejected.
- 7) ☒ Claim(s) 4, 17 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 5-16, 19-20 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eckardt et al. (5,093,053). Eckardt et al. disclose or suggest the basic claimed method for the production of physically foamed injection molded articles, wherein in a first stage a propellant-free or compact first melt portion is fed into a cavity (initial filling), and in a second stage, adding a physical propellant (column 4, lines 9-17) at elevated pressure to a second melt portion and injecting the second melt portion containing the propellant into the cavity. Metering of an injectable component is well known and such would have been obvious to one of ordinary skill in the art practicing the process of Eckardt et al. in order to produce a core layer of desired density. It is submitted that the pressure exerted on the propellant during the injection phase of the process of Eckardt et al. is inherently greater than the pressure on the propellant after its addition in order to permit expansion to occur in the cavity.

Eckardt et al. suggest maintaining pressure, as in claim 3, and the use of valves, as in claims 5-11, and injection equipment, as in claims 12-13, is well known and would have been obvious to one of ordinary skill in the art in order to facilitate and control the delivery of the melt portion and propellant to the cavity.

Eckardt et al. disclose the use of a compressible fluid, as in claim 2, and teach or suggest the use of physical propellants, as in claims 14-16, at column 4, lines 9-17. It is

submitted that a counterpressure builds up in the practice of the process of Eckardt et al., as in claim 19, since the cavity is essentially a closed one. The aspects of claim 20 are essentially a statement of intended uses for the article molded instead of a manipulative step used to distinguish "method" claims over prior art. Eckardt et al. suggest maintaining pressure, as in claim 23.

3. Claims 21-22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al. (4,344,710) as set forth in the previous Office action

4. Claims 4 and 17-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Applicant's arguments filed September 15, 2003 have been fully considered but they are not persuasive. Applicant's arguments concerning Olabisi are considered to be moot by the examiner based on the revised ground of rejection introduced in this Office action. Concerning the Johnson reference, applicant argues that it is directed to an extrusion process, which is continuous, while according to the present invention, the inflow of the propellant is discontinuous and pressure controlled. This is not persuasive because it is essentially directed to how the apparatus structure is to be used rather than the structure itself. It is submitted that the one of ordinary skill in the art is aware that the structure of Johnson et al. is capable of being used in a discontinuous manner by connecting it to a mold.

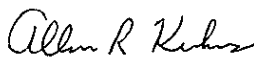
6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allan Kuhns whose telephone number is (571) 272-1202. The examiner can normally be reached on Monday to Thursday from 7:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni, can be reached on (571) 272-1196.


ALLAN R. KUHN
PRIMARY EXAMINER AU 1732
12-29-03